

WHAT IS CLAIMED IS:

1. An apparatus for making paper using a forming fabric, comprising:
a plurality of rollers arranged for cooperative rotation, each of said plurality of rollers
having a first circular end, a second circular end and a cylindrical middle surface, said plurality of
rollers positioned to define a corresponding plurality of nips, said forming fabric being processed
through at least two of said plurality of nips, and at least a first roller of said plurality of rollers
having at least one void formed in said cylindrical middle surface;

5 first and second sealing panels for engaging the first and second circular ends of each of
said plurality of rollers, said first and second sealing panels and said plurality of rollers defining a
chamber;

10 a conduit positioned in said chamber and having a plurality of distribution holes
extending across a width of said forming fabric; and

15 a pressure source fluidly coupled to said conduit to supply a pressurized distributed flow
of a slurry in said chamber across a width of said forming fabric to form a continuous web,
wherein said continuous web is formed on said forming fabric at a location in said chamber
where said chamber fluidly communicates with said at least one void formed in said cylindrical
20 middle surface.

2. The apparatus of claim 1, wherein said at least one void comprises at least one of a
groove, a hole and a pore.

3. The apparatus of claim 2, further comprising a differential pressure source fluidly
coupled to evacuate said at least one void.

4. The apparatus of claim 1, wherein said plurality of rollers together with said first and
second sealing panels, define a first chamber and a second chamber.

5. The apparatus of claim 4, wherein said first chamber is fluidly coupled to said first pressure source for supplying said slurry having a first composition and said second chamber is fluidly coupled to a second pressure source for supplying a second slurry having a second composition.

6. The apparatus of claim 5, wherein said forming fabric travels through said first chamber to receive said slurry to form a first web layer and travels through said second chamber to receive said second slurry to form a second web layer.

7. The apparatus of claim 4, wherein said first chamber is charged with said slurry and said second chamber is charged with a material different from said slurry.

8. A method of forming a continuous web on a forming fabric, comprising the steps of: providing a pressurized chamber; processing said forming fabric through said pressurized chamber; and distributing a pressurized flow of a slurry having a first composition in said pressurized chamber across said width of said forming fabric to form said continuous web.

2. The method of claim 8, wherein said providing a pressurized chamber comprises the step of providing a roller chamber having at least an inlet nip and an outlet nip, wherein said continuous web is de-watered at said outlet nip after formation.

3. The method of claim 8, further comprising the steps of: providing a second pressurized chamber; and

processing said forming fabric through said second pressurized chamber.

4. The method of claim 10, further comprising the step of distributing a second slurry having a second composition in said second pressurized chamber on said continuous web to form a second layer of said continuous web.

12. An apparatus for forming a continuous web on a forming fabric, comprising:
a pressurized chamber having an inlet and an outlet;
a plurality of rollers for processing said forming fabric through said pressurized chamber;
a conduit extending into said pressurized chamber, said conduit including a plurality of
distribution holes which extend across a width of said forming fabric; and
5 a fluid source coupled to said conduit to supply a pressurized distributed flow of a slurry
having a first composition in said pressurized chamber across said width of to said forming
fabric to form said continuous web.

13. The apparatus of claim 12, wherein said plurality of rollers form a nip for de-watering said continuous web after formation.

14. The apparatus of claim 12, wherein said plurality of rollers define said pressurized chamber and a second chamber.

15. The apparatus of claim 14, wherein said second chamber is fluidly coupled to a second pressure source for supplying a second slurry having a second composition to said continuous web.

16. An apparatus for forming a continuous web on a forming fabric, comprising:
a plurality of pressurized chambers;
a plurality of rollers structured and adapted for processing said forming fabric though said
plurality of chambers;

5 a plurality of conduits, each conduit extending into a respective one of said plurality of chambers, said each conduit having a plurality of distribution holes which extend across a width of said forming fabric; and

a plurality of fluid sources, each of said plurality of fluid sources being fluidly coupled to

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a respective one of said conduits, each of said fluid sources supplying a material for forming a corresponding plurality of material layers on said forming fabric.

17. The apparatus of claim 16, wherein said continuous web is de-watered after the initial formation of each material layer of said corresponding plurality of material layers.

18. The apparatus of claim 16, wherein a material in at least one of said plurality of layers differs from a material of another of said plurality of layers.

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